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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,748	02/28/2002	Paul K. Wolber	10020405-1	8764

7590 02/07/2008

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER	
ZHOU, SHUBO	
ART UNIT	**PAPER NUMBER**
1631	

MAIL DATE	DELIVERY MODE
02/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No.	Applicant(s)	
	10/086,748	WOLBER ET AL.	
	Examiner	Art Unit	
	Shubo (Joe) Zhou	1631	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Shubo (Joe) Zhou*. (3)_____.

(2) *Alan Cannon*. (4)_____.

Date of Interview: *31 January 2008*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☐ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *see continuation sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Attachments: - email message to the Examiner from applicant's representative
- proposed amendments for discussion only

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

_____
Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview:

Discussion was focused on the rejections under 35 USC 112 first (new matter) and second paragraphs and possible ways to overcome the rejections.

First, applicant indicated supports in the specification for the limitations of the calibrating probes hybridizing to "almost all" or "all" of the target molecules. The examiner agreed that the new matter rejections for claims for containing these limitations are withdrawn.

With regard to the rejections under 35 USC 112, second paragraph, involving the limitation "a large fraction" of molecules or "almost all" of the target molecules, Mr. Cannon seemed to agree with the examiner that there is still issue of indefiniteness for the limitation of the calibrating probes hybridizing to "almost all" target molecules as it is not clear what constitutes "almost all" target molecules. Mr. Cannon indicated that applicant might cancel claims involving this limitation. As to the limitation "large fraction of target molecules" in claim 1, etc., applicant provided a proposed amendment (an unofficial document for discussion only, which was submitted by Mr. Cannon to the examiner via e-mail without the examiner's request, and which is attached to this interview summary.) which deletes the limitation and substituted with "indiscriminately to specific target molecules." The examiner agreed that this amendment would overcome the rejections under 35 USC 112 first paragraph (the new matter rejection) and second paragraph involving the limitation of "a large fraction" of target molecules. The examiner also reminded applicant that the new limitation "indiscriminately" etc. might require further consideration and the amendment thus might not be entered as an after-final amendment.

/Shubo (Joe) Zhou/

Shubo (Joe) Zhou, Ph.D.
Primary Patent Examiner

Please attach th.3 to the Interview summary and scan them as one document

(A)

Proposed Claim Amendments
Application Serial No. 10/086,748
10020405-1 (AGIL-161CIP)
Exr Shubo Zhuo
Art Unit 1631

1. (Currently Amended) A method for calibrating data scanned from a molecular array, the method comprising:

selecting a molecular array that includes a set of calibrating features, each containing calibrating probes that hybridize, under stringent conditions, indiscriminately to ~~a large fraction of~~ specific target molecules in sample solutions to which the molecular array is intended to be exposed, wherein upon scanning the calibration probes after they have been hybridized with the target molecules, the scanning of the hybridized probes produces signal intensities proportional to the total concentrations of target molecules in the sample solutions, and a set of features containing probes that hybridize to specific target molecules under stringent conditions;

exposing the molecular array to a sample solution;

reading the molecular array to determine signal intensities of the features and calibrating features of the molecular array;

calculating a collective calibration signal intensity from the signal intensities read from the set of calibrating features; and

calculating normalized signal intensities of the features containing probes that hybridize to specific target molecules, based on signal intensities read from features of the molecular array by applying to the signal intensities a normalization function that includes a calculated collective calibration signal.

SUPPORT: Page 36, lines 1-10 an throughout the specification.

2. (Previously Presented) The method of claim 1 wherein said probes that hybridize to specific target molecules are oligonucleotides complementary to portions of cDNA products of reverse transcription of eukaryotic mRNA molecules and wherein the calibrating probes are poly(A) oligonucleotides.

3. (Previously Presented) The method of claim 1 wherein said probes that hybridize to specific target molecules are oligonucleotides complementary to portions of cRNA products of reverse transcription of eukaryotic mRNA molecules and wherein the calibrating probes are poly(A) oligonucleotides.

4. (Previously Presented) The method of claim 1 wherein said probes that hybridize to specific target molecules are oligonucleotides complementary to portions of cDNA products of reverse transcription of human mRNA molecules and wherein the calibrating probes are oligonucleotides complementary to cDNA transcripts of Alu repeat sequences common to many human mRNAs.

5. (Previously Presented) The method of claim 1 wherein said probes that hybridize to specific target molecules are oligonucleotides complementary to portions of

cDNA products of reverse transcription of mRNA molecules and wherein the calibrating probes are oligonucleotides complementary to a synthetic nucleotide sequence appended to primers for reverse transcription of the mRNA molecules.

6. (Previously Presented) The method of claim 1 wherein said probes that hybridize to specific target molecules are oligonucleotides complementary to portions of cDNA products of reverse transcription of ~~copies of the~~ mRNA molecules and wherein the calibrating probes are random-sequence oligonucleotides.

7. (Previously Presented) The method of claim 1,

wherein the calculated collective calibration signal is calculated by calculating a collective calibration signal intensity from the signal intensities read from the ~~set of~~ calibrating features, and wherein said method further includes calculating a set of collective calibration signal intensities by partitioning the signal intensities generated from the calibrating features into sets of similar calibrating signal intensities and calculating a collective signal intensity for each set, so that the sets of similar calibrating signal intensities each covers a discrete range of signal intensities and so that the discrete ranges of signal intensities span an overall range of signal intensities generated from the probes that hybridize to specific target molecules, and

wherein calculating normalized signal intensities based on signal intensities read from features of the molecular array by applying to the signal intensities a normalization function that includes the calculated collective calibration signal further includes applying to each signal intensity a normalization function that includes the calculated collective calibration signal calculated from the set of calibrating signal intensities within the discrete range of intensities in which the signal intensity generated from the feature of the molecular array is included.

8. (Original) The method of claim 1

wherein calculating a collective calibration signal intensity from the signal intensities read from the set of calibrating features further includes calculating the average calibration signal intensity from the signal intensities read from the set of calibrating features, and

wherein calculating normalized signal intensities based on signal intensities read from features of the molecular array by applying to the signal intensities a normalization function that includes the calculated collective calibration signal further includes dividing each signal intensity by the calculated average calibration signal intensity.

9. (Canceled)

10. (Currently Amended) A method for calibrating data scanned from a molecular array, the method comprising:

selecting a molecular array that includes features and that includes a calibration feature that includes calibrating probes that hybridize <u>indiscriminately</u> to ~~a large fraction of~~ target molecules in sample solutions, the calibration feature thereby producing a signal intensity directly proportional to the total concentrations of target molecules in the sample solutions;

exposing the molecular array to a sample solution;

reading the molecular array to determine signal intensities for the features of the molecular array and for the calibrating feature; and

calculating normalized signal intensities for the features, each normalized signal intensity based on the determined signal intensity for the respective feature and the signal intensity generated by the calibration probe, and each normalized signal intensity being directly mathematically related to a mole fraction of sample molecules that hybridize to the respective feature and inversely mathematically related to a mole fraction of sample molecules that hybridize to the calibration feature.

11. (Currently Amended) The method of claim 10 wherein a plurality of calibration features are included in the molecular array, each calibration feature including calibrating probes that hybridize to ~~a majority of~~ target molecules in sample solutions, each said calibration feature thereby producing a signal intensity directly proportional to the total concentration of target molecules in the sample solutions.

12. (Previously Presented) The method of claim 11 wherein a collective calibration signal intensity is calculated from signal intensities read from said plurality of calibration features, and wherein calculating normalized signal intensities for the features further comprises calculating normalized signal intensities based on the signal intensities read from the features of the molecular array by applying to the signal intensities a normalization function that includes the calculated collective calibration signal.

13. (Canceled)

14. (Canceled)

15. (Previously Presented) The method of claim 1, wherein an average of the signal intensities read from the calibrating features is proportional to the total concentration of target molecules in the sample solution to which the array is exposed.

16. (Canceled)

17. (Previously Presented) The method of claim 1, wherein the calibrating probes hybridize to almost all of the target molecules in sample solutions.

SUPPORT: Page 25, line 27 and throughout the specification.

18. (Previously Presented) The method of claim 1, wherein the calibrating probes hybridize to all of the target molecules in sample solutions.

SUPPORT: Page 27, line 22 and throughout the specification.

19. (Previously Presented) The method of claim 10, wherein the calibrating probes hybridize to almost all of the target molecules in sample solutions.

20. (Previously Presented) The method of claim 10, wherein the calibrating probes hybridize to all of the target molecules in sample solutions.

Zhou, Shubo (AU1631)

From: Alan Cannon [alan@acannonlaw.com]

Sent: Wednesday, January 30, 2008 1:09 PM

To: Zhou, Shubo (AU1631)

Subject: SN 10/086,748 - Proposed Claim Amendments for Discussion during Telephone interview of 1.31.2008

Attachments: Proposed Claim Amendments for discussion during tel int of 1.31.2008 - AGIL-161 (10020405-1) - App SN 10-086,748.doc

Hi Examiner Zhou,

Please see attached. I will call at 10:30 your time.

Best regards,
Alan Cannon
Reg. No. 34,977